REMARKS

The Office Action dated December 24, 2008 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1, 25, 26, 32, 40, 41, 43 and 44 have been amended to more particularly point out and distinctly claim the subject matter of the invention. No new matter has been added and no new issues are raised which require further consideration or search. Claims 1-44 are presently pending.

Claims 1, 14, 15, 24, 26-33, 40, 42 and 44 were rejected as being allegedly obvious over the combination of EP 1089515 (Morrow) and U.S. Patent Publication No. 2003/0112828 (Sridhar). Referring, for example, to claim 1, the Office Action took the position that Morrow discloses the limitation of routing the message in the packet data network, and the remaining limitations are disclosed in Sridhar. However, as described in greater detail below, the combination of Morrow and Sridhar fails to disclose each and every limitation of these claims. Accordingly, this rejection is improper and must be withdrawn.

Claim 1, upon which claims 2-24 are dependent, recites a method that includes setting a load control information in a predetermined field of layer three or above message. The method also includes routing the message in a packet data network. The method additionally includes checking the load control information on the routing path of the message. The method further includes selecting a processing resource of the packet

data network in response to the result of the checking of the load control information. The load control information is provided to at least one network element operating in the packet data network to terminate at least one network hop of the message.

Claim 26, upon which claims 27-31 are dependent, recites an apparatus that includes a checking unit configured to check load control information provided in a predetermined field of a layer three or above message. The apparatus also includes a selector configured to select a processing resource for said message in response to the checking unit. The load control information is provided to at least one network element operating in the packet data network to terminate at least one network hop of said message.

Claim 32, upon which claims 33-39 are dependent, recites an apparatus that includes a transmitter configured to transmit a layer three or above message to a packet data network. The apparatus is configured to set into a predetermined field of the message a load control information to select processing resources of the packet data network. The load control information is provided to at least one network element operating in the packet data network to terminate at least one network hop of the message.

Claim 40, upon which claim 42 is dependent, recites a system that includes a first network element to set a load control information in a predetermined field of a layer three or above message to be routed in the packet data network. The system also includes a second network element to check the load control information on the routing path of the

message and to select a processing resource of the packet data network in response to the result of the checking of the load control information. The load control information is provided to at least one network element operating in the packet data network to terminate at least one network hop of said message.

Claim 44 recites a computer program operating on a computer readable medium with similar operations to those recited in claim 1. However, claim 43 has its own scope.

As will be discussed below, the combination of Morrow and Sridhar fails to disclose or suggest all of the elements of any of the presently pending claims.

Morrow discloses a system for selecting a call control server or call session control functions from a plurality of call control servers to process calls in a telecommunications network (see Abstract of Morrow). Morrow describes that a route update message may be received by the NAT 14 and checked with respect to the load sharing status of each CSCF. Similarly, in step 76 of Fig. 6C, an alternative is described where the parameters T and n are included explicitly in the message, such that these parameters are set in this route update message.

With regard to load sharing, Morrow discloses some of the more traditional types of load sharing algorithms performed between networking elements, such as, Round Robin, or weighted control load sharing. In operation, a network address translation device (NAT) 14 must decide which load balancing algorithm to implement. FIGS. 1 and 2 provide flow diagrams that illustrate this decision process of the NAT 14. For example, in step 32 when an incoming packet is detected having a destination address C, the NAT

14 looks up that value in a route table 24 and finds the corresponding route entry "I." Next, NAT 14 accesses a particular field "f" in step 36 as an indicator used to determine which load sharing operation to perform.

Morrow does not disclose or suggest "setting a load control information in a predetermined field of a layer three or above message...and, wherein said load control information is provided to at least one network element operating in said packet data network to terminate at least one network hop of said message", as recited in independent claim 1 and similarly in independent claims 25, 26, 32, 40, 41, 43, 44. Rather, Morrow merely describes setting a load control information in a route table 24 of a network address translation device NAT 14. Morrow also does not disclose a layer 3 or above message used to set the load control information.

The load distribution schemes of Round Robin and weighted sharing are used to distribute the load processing burden across multiple network elements. None of the example load sharing mechanisms disclosed in Morrow operate to "terminate at least one network hop of said message", as recited in independent claim 1 and similarly in independent claims 25, 26, 32, 40, 41, 43, 44.

In view of these and other deficiencies in Morrow, the Office Action alleged that Sridhar discloses the claim recitation of setting the load control information in a predetermined field of the message. More specifically, the Office Action asserted that the load balancing fields (206) in Sridhar, particularly the LB field, can be regarded as load control information, as the load balancing fields are used to indicate that the packet

must be inspected for load balancing purposes. Applicants submit that Sridhar fails to cure the deficiencies of Morrow with respect to the pending claims.

Sridhar discloses that the LB field is used to trigger a processing between neighboring nodes of the resilient packet ring. Thus, a packet with a load control information is not routed in a packet data network, as recited in claim 1. Furthermore, the load control information in Sridhar is not checked on the routing path, as also recited in claim 1. Sridhar discloses using the load control information to select whether the packet is to be returned or not. In other words, Sridhar discloses that the load control information is checked at the far end of a transmission link and is not indented to be routed any further.

In addition to the above-noted deficiencies of Sridhar, Applicants submit that Sridhar also fails to disclose or suggest "setting a load control information in a predetermined field of a layer three or above message...and, wherein said load control information is provided to at least one network element operating in said packet data network to terminate at least one network hop of said message", as recited in independent claim 1 and similarly in independent claims 25, 26, 32, 40, 41, 43, 44. With regard to load control information or load balancing information, Sridhar discloses that packets include fairness indicators which may be read by the nodes of a ring implementation. In particular, the nodes of the ring implementation may be informed about load imbalances via the fairness indicators.

FIG. 4 of Sridhar discloses a method for congestion detection and correction of packets classified to a particular QoS flow on a particular ring. Once a packet is sent from Node A to Node B, then Node B sends the packet back to Node A on a reverse link if Node B detects congestion (see operation 424 and paragraph [0048] of Sridhar). The packet is received and examined at the original sending node A which determines that there is congestion via the indicator in the packet. Next, node A reduces the token bucket rate for a class corresponding to the packet (see operations 428 and 430). By throttling back the rate of a particular QoS class operated on the ring network (see paragraph [0044] of Sridhar), Sridhar is merely managing the rate of flow for the data packets (i.e., bandwidth rate control). None of the example load sharing mechanisms disclosed in Sridhar operate to "terminate at least one network hop of said message", as recited in independent claim 1 and similarly in independent claims 25, 26, 32, 40, 41, 43, 44.

For at least these reasons, the combination of Morrow and Sridhar fails to disclose or suggest all of the features of independent claims 1, 26, 32, 40, 42 and 44. Therefore, these claims are allowable over the cited combination of references. By virtue of dependency, those claims dependent thereon are also allowable. Reconsideration and allowance of claims 1, 14, 15, 24, 26-32, 33, 40, 42 and 44 are therefore respectfully requested.

Claims 2, 6-8, 10-13, 18-22, and 35 were rejected as being allegedly unpatentable over Morrow and Sridhar, further in view of U.S. Patent No. 5,914,953 (Krause). Specifically, the Office Action alleged that Morrow and Sridhar disclose the limitations

of independent claims 1 and 32, and Krause discloses the additional limitations in these dependent claims. However, as described below, this rejection is respectfully traversed because Morrow, Sridhar, and Krause fail to disclose each and every limitation of these claims.

Krause generally describes a processing system that includes multiple processor units and multiple input/output elements communicatively interconnected by a system area network having a plurality of multi-ported router elements.

As discussed above, the combination of Morrow and Sridhar fails to disclose or suggest, at least, to "setting a load control information in a predetermined field of a layer three or above message...and, wherein said load control information is provided to at least one network element operating in said packet data network to terminate at least one network hop of said message", as recited in independent claim 1 and similarly in independent claims 25, 26, 32, 40, 41, 43, 44.

Krause fails to cure the deficiencies of Morrow and Sridhar, and thus, the combination of Krause, Morrow, and Sridhar fails to disclose or suggest, at least, "wherein said load control information is provided to at least one network element operating in said packet data network to terminate at least one network hop of said message", as recited in independent claim 1 and similarly in independent claims 25, 26, 32, 40, 41, 43, 44. Claims 2, 6-8, 10-13, 18-22, and 35 are dependent upon one of claims 1 or 32. Accordingly, claims 2, 6-8, 10-13, 18-22, and 35 should be allowed at least for their dependencies upon claims 1 and 32, as well as for the separate limitations recited in

these claims. Reconsideration and allowance of these claims are respectfully requested for at least these reasons.

Claim 3-5 and 36 were rejected as being allegedly unpatentable over Morrow in view of Sridhar and Krause, and further in view of U.S. Patent No. 6,678,735 (Orton). Specifically, the Office Action alleged that Morrow, Sridhar, and Krause disclose the limitations of claims 2 and 35, and Orton discloses the additional limitations of each of these dependent claims. However, as described below, this rejection is respectfully traversed because Morrow, Sridhar, Krause, and Orton fail to disclose each and every limitation of these claims.

Orton generally describes a method for communicating using Session Initiation Protocol (SIP). The disclosed method includes providing mechanisms by which client applications will not need to maintain information pertaining to the routing of messages.

As discussed above, Morrow, Sridhar, and Krause fail to disclose or suggest, at least, "wherein said load control information is provided to at least one network element operating in said packet data network to terminate at least one network hop of said message", as recited in independent claim 1 and similarly in independent claims 25, 26, 32, 40, 41, 43, 44. Orton fails to cure the deficiencies of Morrow, Sridhar, and Krause, and, thus, the combination of Morrow, Sridhar, Krause, and Orton fails to disclose or suggest, at least, "wherein said load control information is provided to at least one network element operating in said packet data network to terminate at least one network hop of said message", as recited in independent claim 1 and similarly in independent

claims 25, 26, 32, 40, 41, 43, 44. Claims 3-5 and 36 are dependent upon claims 1 and 32. Accordingly, claims 3-5 and 36 should be allowed at least for their dependencies upon claims 1 and 32, as well as for the separate limitations recited in these claims. Reconsideration and allowance of these claims are respectfully requested for at least these reasons.

Claims 9 and 34 were rejected as being allegedly unpatentable over Morrow in view of Sridhar and Krause, and further in view of U.S. Patent No. 7,177,642 (Sanchez Herrero). For example, the Office Action alleged that Morrow, Sridhar, and Krause disclose the limitations of claim 8, and Sanchez Herrero discloses the additional limitation in claim 9 that "subfields are separated by a predetermined bit string, character, or character string". However, as described below, this rejection is respectfully traversed because Morrow, Sridhar, Krause, and Sanchez Herrero fail to disclose each and every limitation of these claims.

Sanchez Herrero generally describes a method for supporting multiple registration from the same user requested from different terminals in a telecommunications system that requires management of information related to the location of the user and related to the plurality of identifiers that identify the user in that system.

As discussed above, Morrow, Sridhar, and Krause fail to disclose or suggest, at least, "wherein said load control information is provided to at least one network element operating in said packet data network to terminate at least one network hop of said message", as recited in independent claim 1 and similarly in independent claims 25, 26,

32, 40, 41, 43, 44. Sanchez Herrero fails to cure the deficiencies of Morrow, Sridhar, and Krause, and, thus, the combination of Sanchez Herrero, Morrow, Sridhar, and Krause also fails to disclose or suggest, at least, "wherein said load control information is provided to at least one network element operating in said packet data network to terminate at least one network hop of said message", as recited in independent claim 1 and similarly in independent claims 25, 26, 32, 40, 41, 43, 44. Claims 9 and 34 are dependent upon an allowable claims 1 or 32, and claims 9 and 34 are accordingly also allowable at least for at least this reason, as well as for the separate limitations recited in these claims. Reconsideration and allowance of these claims are respectfully requested for at least these reasons.

Claim 16 was rejected under 35 U.S.C. 103(a) as being allegedly unpatentable over Morrow in view of Sridhar, Krause, Orton, and Sanchez Herrero. Specifically, the Office Action alleged that Morrow, Sridhar, and Krause discloses each element of claim 14, and Orton and Sanchez Herrero disclose the additional limitations of header field of a SIP message and contact headers. As described below, this rejection is respectfully traversed because Morrow, Sridhar, Krause, Orton, and Sanchez Herrero fail to disclose each and every limitation of claim 16.

As discussed above, Morrow, Sridhar, Krause, Orton, and Sanchez Herrero fail to disclose or suggest, at least, "wherein said load control information is provided to at least one network element operating in said packet data network to terminate at least one network hop of said message", as recited in independent claim 1 and similarly in

independent claims 25, 26, 32, 40, 41, 43, 44. Claim 16 is dependent upon claim 1. Accordingly, claim 16 should be allowed at least for its dependency upon claim 1, as well as for the separate limitations recited in this claim. Reconsideration and allowance of claim 16 are respectfully requested for at least these reasons.

Claim 17 was rejected as being allegedly unpatentable over Morrow and Sridhar in view of U.S. Patent No. 6,501,767 (Inoue). Specifically, the Office Action alleged that Morrow and Sridhar disclose each limitation of claim 17, except for encryption of transmitted packets, but assert that Inoue cures this deficiency. However, as described below, this rejection is respectfully traversed because Morrow, Sridhar, and Inoue fail to disclose each and every limitation of these claims.

Inoue generally relates to a mobile IP communication scheme for supporting a mobile computer moving over different address spaces. In Inoue, A packet relay device for relaying packets having an address of the mobile computer device as a destination or source is provided at a border between a private address space and a global address space, where the packet relay device has a packet receiving unit for receiving a packet in a first format using a global address which is transmitted by the mobile computer for a location registration from a visited site managed by a global address system, and checking a content of the packet, and a packet transfer unit for transferring the packet in a second format using a private address, to a correspondent computer in a home network of the mobile computer managed by a private address system, according to the content of the packet.

As discussed above, Morrow and Sridhar fail to disclose or suggest, at least, "wherein said load control information is provided to at least one network element operating in said packet data network to terminate at least one network hop of said message", as recited in independent claim 1 and similarly in independent claims 25, 26, 32, 40, 41, 43, 44. Inoue does not relate to load control information and therefore fails to cure at least this deficiency in Morrow and Sridhar. Thus, the combination of Morrow, Sridhar, and Inoue also fails to disclose or suggest, at least, "wherein said load control information is provided to at least one network element operating in said packet data network to terminate at least one network hop of said message", as recited in independent claim 1 and similarly in independent claims 25, 26, 32, 40, 41, 43, 44. Claim 17 is dependent upon an allowable claims 1 and are therefore also allowable at least for at least this reason, as well as for the separate limitations recited in claim 17. Reconsideration and allowance of claim 17 are respectfully requested for at least these reasons.

Claims 23 and 37-39 were rejected as being allegedly unpatentable over Morrow and Sridhar in view of Krause, and further in view of U.S. Patent No. 6,115,361 (Fredericks). Similarly, claims 25 and 41 were rejected as being allegedly unpatentable over Morrow and Sridhar in view of Fredericks. Specifically, the Office Action alleged that Fredericks is relevant to the limitation of a network element receiving a packet and recognizing, based on the contents of the packet, that enclosed payload is not regular information traffic. This rejection is respectfully traversed for at least the reasons described below.

Claim 25 recites a method that includes creating a first load control information in a first network element. The method also includes setting said first load control information into a predetermined field of a layer three or above message. The method additionally includes routing said message to a second network element. The method further includes storing said first load control information in said second network element. The method also includes creating a second load control information in said second network element. The method additionally includes setting the second load control information into a predetermined field of a second layer three or above message. The method also includes routing said second message to said first network element. The method includes storing the second load control information at the first network element. At least one of the first and second load control information is provided to at least one network element operating in a packet data network to terminate at least one network hop of the message.

Claim 41 recites a system that includes a first network element configured to create a first load control information and configured to set said first load control information into a predetermined field of a layer three or above message. The system also includes a second network element configured to receive said message, to store said first load control information, to store a second load control information, to set the second load control information into a predetermined field of a second layer three or above message, and to route said second load control information to said first network element. The first network element is configured to store the second load control information. At

least one of the first and second load control information is provided to at least one network element operating in a packet data network to terminate at least one network hop of the message.

As will be discussed below, the combination of Fredericks, Morrow, and Sridhar fails to disclose or suggest all of the elements of any of the presently pending claims.

Fredericks generally describes a method for implementing a link level service in a computer network having a first port device and a second port device coupled by a communication link. For example, Fredericks discloses implementing a link level service in a computer network having a first port device and a second port device coupled by a communication link. Prior to a link incident being reported, the first port device executes a link incident record registration (LIRR) ELS message addressed to the second port device. The second port device responds to the LIRR by adding an address of the first port device to a registration list of ports registered to receive link incident reports. The second port device also responds to the LIRR by sending an accept reply message addressed to the first port device. After a link incident is detected by the second port device, the second port device generates a link incident record comprising data describing the link incident. The second port device selects an address from the registration list sends a registered link incident record ELS message addressed to the selected address

As previously discussed, Sridhar, Morrow, and Krause fail to disclose or suggest, at least, "wherein said load control information is provided to at least one network element operating in said packet data network to terminate at least one network hop of

said message", as recited in independent claim 1 and similarly in independent claims 25, 26, 32, 40, 41, 43, 44. As described above, Fredericks does not relate to this limitation and therefore fails to cure the deficiencies of Sridhar, Krause, and Morrow, and, thus, the combination of Sridhar, Morrow, Krause, and Fredericks fails to disclose or suggest, at least, wherein said load control information is provided to at least one network element operating in said packet data network to terminate at least one network hop of said message", as recited in independent claim 1 and similarly in independent claims 25, 26, 32, 40, 41, 43, 44.

Although patentably distinct, claims 25 and 41 also recite similar limitations and should also be allowed over Sridhar, Morrow, and Fredericks on a similar basis, as well as for the separate recited limitations in claims 25 and 41. As such, it is respectfully requested that the rejection of claims 25 and 41 be withdrawn.

Claims 23 and 37-39 are dependent upon claims 1 and 32. Accordingly, claim 23 and 37-39 should be allowed at least for their dependencies upon claims 1 and 32, as well as for the separate limitations recited in claim 17. Reconsideration and allowance of claims 23, 25, 37-39, and 41 are, therefore, respectfully requested for at least these reasons.

Claim 43 was rejected as being allegedly unpatentable over Morrow in view of Sridhar and Sanchez Herrero. However, as described below, this rejection is respectfully traversed because Morrow, Sridhar, and Sanchez Herrero fail to disclose each and every limitation of claim 43.

Claim 43 relates to an apparatus that includes checking means for checking load control information provided in a predetermined field of a layer three or above message. The apparatus also includes selecting means for selecting a processing resource for said message in response to said checking means. The load control information is provided to at least one network element operating in the packet data network to terminate at least one network hop of said message. As will be discussed below, the combination of Sanchez Herrero, Morrow, and Sridhar fails to disclose or suggest all of the elements of claim 43.

As discussed above, Morrow, Sanchez Herrero, and Krause fail to disclose or suggest, at least, "wherein said load control information is provided to at least one network element operating in said packet data network to terminate at least one network hop of said message", as recited in independent claim 1 and similarly in independent claims 25, 26, 32, 40, 41, 43, 44. Although patentably distinct from the other independent claims, claim 43 should therefore also be allowable for similar reasons, as well as for the separate recited limitations in claim 43. Reconsideration and allowance of claim 43 are respectfully requested for at least these reasons.

For at least the reasons discussed above, it is respectfully submitted that the cited prior art fails to disclose or suggest all of the elements of the claimed invention. These distinctions are more than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 1-44 be allowed, and this application be passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

Kamran Emdadi
Registration No. 58,823

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Vienna, Virginia 22182-6212
Telephone: 703-720-7800
Fax: 703-720-7802

KE:sjm